



SPECIFICATION

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034400-06901

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN that I, Mark C. Embrey, a citizen of the United States of America, residing in the State of Ohio, have invented new and useful improvements in a

METHOD AND APPARATUS FOR MAKING PAYMENTS AND DELIVERING  
PAYMENT INFORMATION

of which the following is a specification:

**1. Cross-Reference to Related Applications:**

This application claims the benefit of U.S. Provisional Patent Application Serial No. 60/033,165; filed 4 October 1996, entitled ***Method and Apparatus for Making Payments and Delivering Payment Information.***

## BACKGROUND OF THE INVENTION

### 2. Field of the Invention:

The present invention in general relates to automated techniques for making payments, and in particular relates to systems for consolidating and streamlining payment activities through the utilization of a third party payment service provider. The present invention also relates to a system which allows for the delivery of payment information independent of the payment activity.

### 3. Description of the Prior Art:

Accounting and disbursement procedures for oil and gas activities are rather complicated. Typically, the oil and/or gas producing properties have royalty and working interest payments which are due many times throughout the year to a large number of individuals. As time passes, the number of individuals and companies who expect, and do, receive payment from the party responsible for the payment of funds increases, while the amounts due to them decreases. An increase in the number of payees occurs as royalty and working interests are passed down through the generations and amounts due to the payees decreases, both due both to this division of ownership, and declining production from the properties. In some cases, the payments are so small that the transaction costs associated with making the distributions are disproportionately and uneconomically large. Sometimes, the printing, postage and administrative costs are significant when compared to the payment due to those individuals having a marginal or negligible interest in the property.

A similar problem occurs in the accounting and payment activities for governmental entitlement programs. This is especially true since typically each entitlement program has an associated accounting and disbursement burden.

1 The standards for eligibility to the available entitlement programs include  
2 common factors such as income level, age, and disability status. A citizen that  
3 is entitled to benefits under one entitlement program is generally eligible for  
4 entitlement benefits from other types of entitlement programs. Therefore, there  
5 is considerable duplication of efforts in the accounting and disbursement  
6 systems for governmental entitlement programs.

7 Similar problems arise for the accounting and disbursement systems for  
8 investment instruments such as stocks and bonds. Payments, such as  
9 dividends, are typically made at least once a year for such financial  
10 instruments. If a company's economic performance is poor, the dividends may  
11 be small or negligible in value. Additionally, over the last decade, an increase  
12 in investment activities by relatively small unsophisticated investment entities,  
13 (e.g., individuals) has resulted in smaller and smaller blocks of stock being held  
14 for long intervals by such entities. The cost and burden associated with the  
15 reporting and payment of dividends to such small investors are significant. In  
16 some instances, the printing, postage and administrative costs are significant  
17 when compared to the dividend amounts actually paid.

18 The three specific examples discussed above (the oil and gas industry,  
19 government entitlement programs, and the investment industry) share common  
20 features. First, a payment obligation exists for a multitude of payor entities.  
21 A relatively large number of payee entities expect regular payments from the  
22 payors. Secondly, it is likely that any particular payee entity expects payments  
23 from multiple payor entities. For example, an individual who actively invests  
24 in oil and gas exploration projects is likely to expect payments from several  
25 payor entities. Likewise an unemployed, disabled, or impoverished individual  
26 is likely to expect multiple payments from governmental entities under a variety  
27 of entitlement programs. Likewise, an investor is likely to expect regular  
28 dividends from multiple payor entities. Third, the payments being made from

1 the payor entities to the payee entities is frequently disproportionately small in  
2 comparison with the administrative and direct expenses associated with making  
3 such payment. For example, in the oil and gas industry, it is common for an  
4 investor to receive relatively small (and frequently decreasing) royalty or  
5 working interest payments from payor entities. Likewise, as governmental  
6 entitlement programs are reduced in size and scope due to budget constraints,  
7 the payments which are made from the payor entities to the payee entities are  
8 decreasing in amount, while the expense associated with administering and  
9 making payments increases at least in an amount comparable to inflation.  
10 Likewise, in economic downturns, it is not uncommon for an investor to receive  
11 rather insignificant dividends from a variety of payor entities. Fourth, while the  
12 expense associated with making such payments may be large in comparison to  
13 the amount of the payments, such payments must nevertheless be made with  
14 regularity in order to prevent the loss of investor confidence (in the case of the  
15 oil and gas or investment industries) and in order to fulfill statutory and  
16 regulatory obligations (in the case of the oil and gas industry and entitlement  
17 programs). Fifth, independently of how payments are made, a relatively large  
18 number of entities may expect from the payors periodic reporting relating to the  
19 payments which are mandated by contract, statute, or regulation.

20 Numerous other commercial and financial arrangements exist which  
21 present similar problems, insofar as the administrative and expense burden  
22 associated with an accounting and distribution system is frequently  
23 disproportionately large in comparison with the amount of the payments being  
24 made. These other examples will not be discussed in this present application,  
25 in order to simplify this description, but can nonetheless be improved through  
26 the present invention.

## SUMMARY OF THE INVENTION

It is one objective of the present invention to provide an improved method and apparatus for making payments which allows a service provider to make payments, on behalf of a plurality of payor entities, to a plurality of payee entities, in a manner which greatly reduces the operating and administrative costs for accounting and disbursement activities, and which greatly streamlines and consolidates the payment activities and provides highly organized and consolidated information to the plurality of payee entities.

It is another objective of the present invention to provide an improved method of making payments which allows the service provider to achieve the foregoing efficiencies in coordinated activity with at least one trusted intermediary financial institution, which transfers funds between the plurality of payor entities, the service provider, and the plurality of payee entities in a manner which maximizes security and accountability, and which in particular minimizes the opportunity for fraudulent activities by either the service provider or by payee entities (or individuals falsely presenting themselves as payee entities).

It is another objective of the present invention to attain the foregoing objectives in a highly automated manner, and in particular in a manner which relies heavily upon the electronic communication of data and the electronic transferring of funds.

These and other objectives are achieved as is now described. When characterized as an improved method of making payments from a plurality of payor entities to a plurality of payee entities through a service provider, the invention consists of a number of method steps which will now be described. First, authorization is obtained from a plurality of payor entities which allows

1 a service provider to make payments, on behalf of the plurality of payor  
2 entities, to a plurality of payee entities. Then at least one trusted intermediary  
3 financial institution is selected. The trusted intermediary financial institution  
4 periodically receives payment information and payment authorization from the  
5 plurality of payor entities. The trusted intermediary financial institution  
6 automatically transfers funds, in amounts only consistent with the payment  
7 information, to the service provider upon verification of payment authorization.  
8 Preferably, the payment information includes at least (1) an identification of  
9 each of the plurality of payee entities; (2) an identification of payment amounts  
10 for each of the plurality of payee entities; (3) a payment record identifier (also  
11 referred to as a "virtual check number") which is uniquely associated with each  
12 payment; and (4) an authorization code which is uniquely associated with each  
13 payment record identifier.

14 Additionally, payment instructions are periodically communicated from  
15 the plurality of payor entities to the service provider. The payment information  
16 includes at least (1) an identification of each of the plurality of payee entities,  
17 (2) an identification of payment amounts for each of the plurality of payee  
18 entities; and (3) a payment record identifier which is uniquely associated with  
19 each payment amount such as a "virtual check number".

20 Then, the service provider is utilized to (1) consolidate payment  
21 instructions from the plurality of payor entities, (2) direct a negotiable  
22 instrument, in an amount equal to the consolidated payments, to each of the  
23 plurality of payee entities, (3) generate payment verification information for the  
24 negotiable instruments (such as "positive pay" data), and (4) communicate the  
25 payment verification information to the trusted intermediary financial institution.  
26 Upon receipt of the negotiable instrument from any of the plurality of payee  
27 entities, the trusted intermediary financial institution is utilized to (1) verify the  
28 request for payment, and (2) automatically transfer funds between the plurality

1 of payor entities and the service provider in amounts necessary to allow  
2 payment (or "honoring of") the negotiable instrument.

3 This improved method of making payments is highly advantageous for  
4 at least the following reasons:

5 (1) The present invention increases efficiency and decreases cost in  
6 accordance with economy-of-scale principles. The service  
7 provider is utilized to consolidate payment information and  
8 payments, from any number of payor entities, in a manner which  
9 eliminates the duplication of effort and expenses inherent in the  
10 uncoordinated operation of the payors' accounting and  
11 disbursement systems. Additionally, the cost benefits associated  
12 with the outsourcing of services can be obtained.

13 (2) The present invention increases efficiency and decreases cost  
14 without introducing any increased business risk. While the service  
15 provider acts as a payment agent for the plurality of payor  
16 entities, the trusted intermediary financial institution is able to  
17 tightly control the flow of funds, so that the service provider need  
18 not be trusted with large sums; the trusted intermediary financial  
19 institution may be a well known and trusted financial institution,  
20 such as a bank, so the funds for the payments are not exposed to  
21 any unnecessary or unusual commercial risks; alternatively, the  
22 trusted intermediary financial institution may be any trusted  
23 institution that will direct the transfer of funds from one or more  
24 banks.

25 (3) The present invention enhances the communication of information  
26 to the payee entities. A substantial amount of payment



1 information can be passed from the payor entities, through the  
2 service provider, to the payee entities; this information may be  
3 arranged in a manner which renders the information more useful  
4 to the payee entities, making it easier to keep accurate financial  
5 records for internal accounting, reporting, and tax filing activities.

6 (4) The present invention allows the payor entities to maintain  
7 general control over the payment process. The payment  
8 information and payment authorization which is communicated  
9 from the plurality of payor entities to the trusted intermediary  
10 financial institution includes an authorization code which is  
11 uniquely associated with each payment; however, this  
12 authorization code is not communicated or revealed to the service  
13 provider, and provides a means for allowing secure communication  
14 between a particular payor entity and the trusted intermediary  
15 financial institution.

16 (5) The present invention increases security of a payment system by  
17 minimizing the opportunity for alteration of the negotiable  
18 instruments. The service provider consolidates payments and  
19 generates a negotiable instrument which is either communicated  
20 electronically or through conventional postal services to the  
21 plurality of payee entities. For each negotiable instrument  
22 (whether in electronic form or in printed check form) the service  
23 provider generates payment verification information (such as  
24 "positive pay" information) which is communicated to the trusted  
25 intermediary financial institution. When the negotiable instru-  
26 ments are presented to the trusted intermediary financial  
27 institution, the payment verification information is utilized to verify

1 the request for payment, to minimize the opportunity for  
2 fraudulent manipulation or reconstruction of a negotiable  
3 instrument with an altered payment amount or altered check  
4 number; therefore, the payment verification information typically  
5 includes an identification of the negotiable instrument and an  
6 identification of the amount of the negotiable instrument. The  
7 service provider can compare a presented negotiable instrument  
8 for both the identification of the payee for the instrument and the  
9 amount of the instrument in order to avoid making payment on a  
10 negotiable instrument which has been fraudulently manipulated or  
11 reconstructed to alter the identity of the payee or the check  
12 number or the amount due. This greatly increases the security of  
13 the payment system.

- 14 (6) The present invention allows the payor entities maximum control  
15 and use of the funds set aside for the payments. Upon  
16 presentation of a negotiable instrument, the trusted intermediary  
17 financial institution will make automatic funds transfers to move  
18 funds between the bank accounts of particular ones of the  
19 plurality of payor entities and the service provider. This is  
20 advantageous insofar as it allows the plurality of payor entities to  
21 maintain control of the funds and obtain, where permissible,  
22 interest on, or otherwise use, the funds which have been set aside  
23 for the payments up until the time that the negotiable instrument  
24 is actually presented to the trusted intermediary financial  
25 institution in a demand for payment. Typically, the payor entities  
26 are sufficiently large and sophisticated to maximize the use of  
27 capital, even for relatively short intervals. It is advantageous that  
28 the present invention does not require that funds be deposited  
29 with, or held by, the service provider; consequently, the payor

1 entities have the benefit of an interval of use of these funds which  
2 is comparable to the "float" that can be obtained by utilizing  
3 negotiable instruments.

4 (7) The present invention allows for the maximum use of data  
5 processing systems in effecting payment. Payment information  
6 and payment instructions may be retrieved and organized utilizing  
7 data processing implemented instructions. The payment  
8 information and payment instructions may be provided to the  
9 service provider in digital form, and may be communicated over  
10 a distributed data processing system. Likewise, the payment  
11 authorization and payment instructions may be communicated  
12 electronically to the at least one trusted intermediary financial  
13 institution. The payment verification information may be  
14 communicated electronically to the at least one trusted  
15 intermediary financial institution. Additionally, the funds transfers  
16 may be accomplished utilizing conventional electronic funds  
17 transfers, such as E.F.T. or E.D.I.B.A.N.X.

18 In one particular embodiment of the present invention, a service provider  
19 may be utilized to consolidate and deliver payment information from a plurality  
20 of payor entities to a plurality of payee entities, even though the service  
21 provider may not perform payment activities on behalf of the plurality of payor  
22 entities. This provides a significant advantage over the prior art, insofar as it  
23 allows the plurality of payor entities to satisfy financial obligations, without  
24 personally satisfying the associated reporting obligation. This minimizes the  
25 administrative and other costs associated with making of payments, and thus  
26 allowing the payor entities to efficiently "outsource" the reporting obligations,  
27 while maintaining tight control over the satisfaction of the payment obligations.

1           These objectives may be obtained by the improved method of delivering  
2 payment information according to the present invention. To characterize this  
3 method, the invention is directed to an improved method of delivering payment  
4 information from a plurality of payor entities to a plurality of payee entities  
5 coordinated in operation of the plurality of payor entities in the information  
6 service provider. At least one data processing system is utilized to sort and  
7 format payment information of the plurality of entities concerning the plurality  
8 of payment obligations. Payment information is communicated to the  
9 information service provider. At least one data processing system is utilized,  
10 which is under the control of the information service provider, to consolidate  
11 the payment information concerning the plurality of payment obligations from  
12 a plurality of payor entities in accordance with at least one predetermined  
13 consolidation criterion. Preferably, the predetermined consolidation criterion  
14 comprises grouping the payment information by for each payee identity, in  
15 order to obtain efficiencies in reporting information due a plurality of payees.  
16 Then, the payments are directed to the plurality of payees by the plurality of  
17 payors in order to satisfy the plurality of payment obligations. The information  
18 service provider operates independently of the plurality of payors to direct  
19 consolidated payment information to the plurality of payees, without requiring  
20 active interaction between the information service provide and the plurality of  
21 payees. Preferably, the consolidated payment information is communicated  
22 either electronically or in printed format from the information service provider  
23 to the plurality of payees. The plurality of payees are not required to interact,  
24 electronically, or otherwise, with the information service provider in order to  
25 obtain this information. In alternative embodiments, the plurality of payor  
26 entities may utilize one service provider to direct negotiable instruments to the  
27 plurality of payees, while using another service provider to direct consolidated  
28 financial information (such as payment information) to the plurality of payees,  
29 with each of the service providers operating independently of one another.

- 1 Additional objectives, features and advantages will be apparent in the
- 2 written description which follows.

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## BRIEF DESCRIPTION OF THE DRAWINGS

The novel features believed characteristic of the invention are set forth in the appended claims. The invention itself, however, as well as a preferred mode of use, further objectives and advantages thereof, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings, wherein:

**Figure 1** is a schematic depiction of the improved payment system of the present invention;

**Figure 2** is a schematic depiction of a distributed data processing system which may be utilized to effect the improved payment system of the present invention;

**Figure 3** is a pictorial representation of a data processing system which may be utilized to implement the improved payment system of the present invention;

**Figure 4** is a pictorial representation in broad overview of the steps of the preferred improved payment system of the present invention;

**Figures 5, 6, and 7** are pictorial representations of authorizations for payment in accordance with the preferred embodiment of the improved payment system of the present invention;

**Figure 8** is a flowchart representation of one technique for generating payment information for a particular one of a plurality of payor entities, in accordance with the improved payment system of the present invention, for oil

and gas payment activities;

**Figure 9** is a pictorial representation of a format report for a check summary report, in accordance with one preferred embodiment of the present invention, which arranges payment information in a data block which facilitates the electronic communication of information from a particular payor entity to a service provider;

**Figure 10** is a flowchart representation of a data processing implemented generation of the data blocks for a check summary report in accordance with **Figure 9**;

**Figure 11** is a pictorial representation of a format report for a check detail report for oil and gas revenue distributions, in accordance with one embodiment of the present invention;

**Figure 12** is a pictorial representation of a format report for a check detail report for government agency distributions, in accordance with one embodiment of the present invention;

**Figure 13** is a pictorial representation of a format report for a check detail report for stock dividend distribution, in accordance with one embodiment of the present invention;

**Figure 14** is a flowchart representation of a data processing implemented compilation of payment obligation records.

**Figure 15** is a pictorial representation of a format report for an end record report, which may be utilized for data communications integrity verification, in accordance with one particular embodiment of the present invention;

1           **Figure 16** is a flowchart representation of a data processing  
2 implementation of the automatic generation of an end record report in  
3 accordance with **Figure 15**;

4           **Figures 17, 18, 19, and 20** depict and describe a data block which is  
5 generated in accordance with one preferred embodiment of the present  
6 invention, which is utilized to communicate payment information to a service  
7 provider;

8           **Figure 21** is a pictorial representation of a format report for an approved  
9 pay sheet which is communicated from a particular payor entity to a particular  
10 trusted intermediary financial institution;

11           **Figure 22** is a flowchart representation of a data processing implemented  
12 generation and utilization of an approved pay sheet in accordance with **Figure**  
13 **21**;

14           **Figures 23A, 23B, and 23C** are pictorial representation of a format report  
15 for a positive pay report which is provided by a service provider to a trusted  
16 intermediary financial institution, and which is utilized to verify a demand for  
17 payment when a negotiable instrument is presented to the trusted intermediary  
18 financial institution by a payee;

19           **Figure 24** is a flowchart representation of the data processing  
20 implemented generation of a positive pay report in accordance with **Figure 23**;

21           **Figure 25** is a pictorial representation of an exemplary positive pay  
22 transmission from a service provider to a trusted intermediary financial  
23 institution, in accordance with one particular embodiment of the present  
24 invention;



1           **Figure 26** is a pictorial representation of a data dictionary which may be  
2 utilized in conjunction with several of the foregoing figures to define particular  
3 data fields;

4           **Figure 27** is a pictorial representation of an exemplary report which may  
5 be provided by a service provider in accordance with the present invention to  
6 a particular payee, for the oil and gas industry;

7           **Figure 28** is a pictorial representation of an exemplary report which may  
8 be provided by a service provider in accordance with the present invention to  
9 a particular payee, for government entitlement and other programs;

10           **Figure 29** is a pictorial representation of an exemplary report which may  
11 be provided by a service provider in accordance with the present invention to  
12 a particular payee, for stock dividend payments;

13           **Figure 30** is a flowchart depiction of a data processing implemented  
14 verification of positive pay and authorization information, in accordance with  
15 one particular embodiment of the present invention;

16           **Figure 31** is a flowchart depiction of a data processing implemented  
17 confirmation of payment activities which is provided to the plurality of payor  
18 entities; and

19           **Figure 32** is a pictorial representation of the preferred improved  
20 information reporting system of the present invention;

21           **Figure 33** is a flowchart representation of the steps which must be  
22 implemented in order to perform the information reporting activities; and

1                    **Figure 34** is a pictorial representation of an exemplary informational  
2                    report.

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## DETAILED DESCRIPTION OF THE INVENTION

Figure 1 is a pictorial representation of an improved method and apparatus of making payments in accordance with the present invention. A plurality of payor entities 15 (including subscribers 19, 21, 23, and 25) have obligations to a plurality of payee entities 17 (including payees 27, 29, 31, and 33). In accordance with the present invention a service provider 11 operates to make those payments on behalf of the plurality of payor entities 15 to the plurality of payee entities 17. The activities of service provider 11 are coordinated with at least one trusted intermediary financial institution 13. In accordance with the present invention, service provider 11 obtains authorization from the plurality of payor entities 15, which allows the service provider 11 to make payments on behalf of the plurality of payor entities 15 to the plurality of payee entities 17. Preferably, service provider 11 generates negotiable instruments and directs them to the plurality of payee entities 17. The plurality of payee entities 17 utilize the payee banks 47, 49, 51, and 53 (collectively 37) to make a series of presentments of the negotiable instruments, in order to obtain payment. The negotiable instruments are typically routed for collection, for example, through automated clearing houses such as automated clearing house 55. Preferably, the negotiable instruments generated by service provider 11 are drawn on one or more accounts set up with trusted intermediary financial institution 13. Accordingly, those negotiable instruments are ultimately presented through automated clearing house 55 (and other automated clearing houses) to trusted intermediary financial institution 13, for payment. In accordance with the present invention, arrangements are made for the trusted intermediary financial institution 13 to periodically receive payment information and payment authorization from the plurality of payor entities 15. Additionally, the trusted intermediary financial institution 13 is authorized to automatically transfer funds to the service provider's 11 disbursement account in amounts consistent with the payment information and

1 payment authorization (that is, not a greater or lesser amount).

2 Preferably, the payment information includes an identification of payment  
3 amounts for each of the plurality of payee entities 17, a payment record  
4 identifier (such as a "virtual check number") which is uniquely associated with  
5 each payment amount, and an authorization code which is associated with each  
6 payment identifier. The payment information may optionally include an  
7 identification of each of the plurality of payee entities 17. The authorization  
8 code can be a preestablished character string which is uniquely associated with  
9 each payment identifier, or it can be a character string generated by a random  
10 number generator or similar algorithm. The authorization code can serve as a  
11 password which allows secure verbal communication between the trusted  
12 intermediary financial institution(s) and the plurality of payor(s), since the  
13 trusted intermediary can request that a purported payor correctly identify the  
14 authorization code prior to revealing confidential information.

15 Also, in accordance with the present invention, payment instructions are  
16 periodically communicated from the plurality of payor entities 15 to service  
17 provider 11. The payment instructions include at least (1) an identification of  
18 each of the plurality of payee entities 17; (2) an identification of payment  
19 amounts for each of the plurality of payee entities 17; and (3) a payment record  
20 identifier uniquely associated with each payee entity.

21 In accordance with the present invention, the service provider 11 is  
22 utilized to (1) consolidate payment instructions from the plurality of payor  
23 entities 15; (2) direct a negotiable instrument to each of the plurality of payee  
24 entities 17; (3) generate payment verification information (such as, for example,  
25 "positive pay" information) for the negotiable instruments; and (4) communicate  
26 the payment verification information to the trusted intermediary financial  
27 institution 13. In accordance with the present invention, the payment

1 verification information contains the information which is necessary to minimize  
2 the risk associated with altered or fraudulent negotiable instruments. In  
3 particular, at least the payment amount of a negotiable instrument is  
4 communicated from service provider 11 to trusted intermediary financial  
5 institution 13. When a negotiable instrument is ultimately presented to trusted  
6 intermediary financial institution 13, the trusted intermediary financial  
7 institution 13 may compare a negotiable instrument with the payment  
8 verification information in order to verify the payment amount. For each  
9 negotiable instrument, upon receipt thereof, trusted intermediary financial  
10 institution 13 is utilized to verify the request for payment and automatically  
11 transfer funds between accounts for the plurality of payor entities 15 and  
12 service provider 11, in amounts necessary to effect payment. Preferably, these  
13 automatic transfers are accomplished utilizing conventional electronic funds  
14 transfer technology or E.D.I.B.A.N.X. transfer technology which are hereinafter  
15 collectively referred to as "electronic fund transfer(s)". In this manner, the  
16 disbursement account or accounts of service provider 11 with trusted  
17 intermediary financial institution 13 need not be funded in any amount  
18 whatsoever. Upon presentation of the negotiable instrument (typically, the  
19 instrument is passed through one or more banks including payee banks 37 and  
20 automated clearing house 55, trusted intermediary financial institution can  
21 perform conventional and automatic electronic funds transfers or E.D.I.B.A.N.X.  
22 transfers, typically by batch process at predetermined time intervals, (once the  
23 request for payment is validated) in order to fund the transaction and allow  
24 payment.

25 In the preferred embodiment of the present invention, a distributed data  
26 processing system is utilized to perform many or all of the above identified  
27 functions. This greatly increases the speed and efficiency of operation and  
28 reduces the possibility of human error. A distributed data processing system  
29 is depicted in Figure 2, and a personal computer is depicted in Figure 3. The

1 distributed data processing system and the personal computer can be utilized  
2 in accordance with the present invention to automate many or all of the  
3 significant operations of the improved method of making payments of the  
4 present invention.

5 With reference now to the figures and in particular with reference to  
6 **Figure 2**, there is depicted a pictorial representation of a distributed data  
7 processing system **108** which may be utilized to implement the method and  
8 system of the present invention. As may be seen, distributed data processing  
9 system **108** may include a plurality of networks, such as Local Area Networks  
10 (LAN) **110** and **132**, each of which preferably includes a plurality of individual  
11 computers **112** and **130**, respectively. Of course, those skilled in the art will  
12 appreciate that a plurality of Intelligent Work Stations (IWS) coupled to a host  
13 processor may be utilized for each such network.

14 As is common in such data processing systems, each individual computer  
15 may be coupled to a storage device **114** and/or a printer/output device **116**.  
16 One or more such storage devices **114** may be utilized, in accordance with the  
17 method of the present invention, to store the various data objects or  
18 documents which may be periodically accessed and processed by a user within  
19 distributed data processing system **108**, in accordance with the method and  
20 system of the present invention. In a manner well known in the prior art, each  
21 such data processing procedure or document may be stored within a storage  
22 device **114** which is associated with a Resource Manager or Library Service,  
23 which is responsible for maintaining and updating all resource objects  
24 associated therewith.

25 Still referring to **Figure 2**, it may be seen that distributed data processing  
26 system **108** may also include multiple mainframe computers, such as  
27 mainframe computer **118**, which may be preferably coupled to Local Area

1 Network (LAN) 110 by means of communications link 122. Mainframe  
2 computer 118 may also be coupled to a storage device 120 which may serve  
3 as remote storage for Local Area Network (LAN) 110. Other Local Area  
4 Networks (LAN) 132 may be coupled to Local Area Network (LAN) 110 via  
5 communications controllers 126 and communications links 134 to gateway  
6 servers 128. Gateway server 128 is preferably an individual computer or  
7 Intelligent Work Station (IWS) which serves to link Local Area Network (LAN)  
8 132 to Local Area Network (LAN) 110.

9 As discussed above with respect to Local Area Network (LAN) 132 and  
10 Local Area Network (LAN) 110, a plurality of data processing procedures or  
11 documents may be stored within storage device 120 and controlled by  
12 mainframe computer 118, as Resource Manager or Library Service for the data  
13 processing procedures and documents thus stored.

14 Of course, those skilled in the art will appreciate that mainframe  
15 computer 118 may be located a great geographical distance from Local Area  
16 Network (LAN) 110 and similarly Local Area Network (LAN) 110 may be  
17 located a substantial distance from Local Area Network (LAN) 132. That is,  
18 Local Area Network (LAN) 132 may be located in California while Local Area  
19 Network (LAN) 110 may be located within Texas and mainframe computer 118  
20 may be located in New York. In the view of Figure 2, payor 15, service  
21 provider 11, and trusted intermediary financial institution 13 may be in  
22 possession and/or control of various local area networks, and in either  
23 continuous or intermittent communication with one another in order to  
24 accomplish the objectives of the present invention.

25 With reference to Figure 3, there is depicted a pictorial representation of  
26 data processing system 210 which may be programmed in accordance with the  
27 present invention. As may be seen, data processing system 210 includes

1 processor **212** which preferably includes a graphics processor, memory device  
2 and central processor (not shown). Coupled to processor **212** is video display  
3 **214** which may be implemented utilizing either a color or monochromatic  
4 monitor, in a manner well known in the art. Also coupled to processor **212** is  
5 keyboard **216**. Keyboard **216** preferably comprises a standard computer  
6 keyboard which is coupled to the processor by means of cable **218**.

7 Also coupled to processor **212** is a graphical pointing device, such as  
8 mouse **220**. Mouse **220** is coupled to processor **212**, in a manner well known  
9 in the art, via cable **222**. As is shown, mouse **220** may include left button  
10 **224**, and right button **226**, each of which may be depressed, or "clicked", to  
11 provide command and control signals to data processing system **210**. While  
12 the disclosed embodiment of the present invention utilizes a mouse, those  
13 skilled in the art will appreciate that any graphical pointing device such as a  
14 light pen or touch sensitive screen may be utilized to implement the method  
15 and apparatus of the present invention. Upon reference to the foregoing, those  
16 skilled in the art will appreciate that data processing system **210** may be  
17 implemented utilizing a so-called personal computer.

18 **Figure 4** is a flow representation of the preferred method and apparatus  
19 of making payments, in accordance with a preferred embodiment of the present  
20 invention. As is shown, there is interaction between service provider **11**,  
21 payors **19, 21, 23**, trusted intermediary financial institution **13**, and payees **27,**  
22 **29, 31**. Preferably, the interaction between service provider **11**, payors **19,**  
23 **21, 23**, and trusted intermediary financial institution **13** is accomplished  
24 utilizing data processing implemented steps. Interaction between those entities  
25 and payees **27, 29, 31** may or may not be conducted utilizing data processing  
26 implemented steps. The flow of **Figure 4** provides considerable detail regarding  
27 the relationship between service provider **11**, payor **19**, trusted intermediary  
28 financial institution **13**, and payee **27**. Payors **21, 23**, and payees **29, 31** have



1 similar relationships which are represented generally by the flow arrows **28, 30,**  
2 **32, 34, 36, 38, 40, and 42.** The following textual discussion will deal  
3 exclusively with the relationship between payor **19,** payee **27,** service provider  
4 **11,** and trusted intermediary financial institution **13.** Where appropriate, the  
5 other relationships with the other payors and/or payees will be mentioned.

6 STEP ONE: In this step, payor **19** and service provider **11** enter into a  
7 contractual relationship regarding the payment of obligations by service provider  
8 **11** on behalf of payor **19** to a plurality of payee entities which is preferably  
9 communicated electronically between payor **19** and service provider **11,** and  
10 which provides authorization to service provider **11** to perform the payment  
11 services which will be described below.

12 STEP TWO: In this step, payor **19** and trusted intermediary financial  
13 institution **13** enter into a contractual relationship which allows trusted  
14 intermediary financial institution **13** to withdraw and otherwise handle funds  
15 of payor **19** in a manner which is consistent with the contractual obligations  
16 between payor **19,** trusted intermediary financial institution **13,** and service  
17 provider **11.**

18 STEP THREE: In this step, payor **19** establishes an account **82** with  
19 trusted intermediary financial institution **13** which will be utilized to pass funds  
20 to trusted intermediary financial institution **13** when pre-authorized requests for  
21 payment are received by trusted intermediary financial institution **13.** In  
22 alternative embodiments, the trusted intermediary financial institution may  
23 comprise a trusted entity which directs and controls the actions of one or more  
24 banks for the purpose of effecting payment. In one particular alternative  
25 embodiment, no new account need be established; instead, electronic funds  
26 transfers from preexisting accounts are utilized to pass funds.

1           STEP FOUR: In this step, service provider **11** establishes an account **84**  
2 with trusted intermediary financial institution **13**; preferably, such account  
3 would be contractually restricted to prevent the service provider from making  
4 withdrawals. This account will be managed in a coordinated manner with the  
5 account established by payor **19**.

6           STEPS FIVE, SIX AND SEVEN: In Step Five, payor **19** reviews its  
7 internal accounting records by performing an automatic data processing  
8 implemented search in order to determine what payment obligations will be  
9 passed to service provider **11** and trusted intermediary financial institution **13**  
10 for satisfaction. **Figure 14** provides one example of a flowchart representation  
11 of a data processing implemented assembly of payment records. In Step Six,  
12 all the payments in the time interval of in question, the data processing system  
13 of payor **19** is then utilized to create a check summary. An example of the  
14 format utilized for a check summary is depicted in **Figure 9**. **Figure 10** is a  
15 flowchart representation of a data processing implemented generation of a  
16 check summary. Each payment obligation will contain payment information  
17 which is maintained in a pre-selected data format. **Figures 11, 12, and 13**  
18 provide format reports for the payment details which are characterized in those  
19 figures as a "check detail report." In Step Seven, payor **19** utilizes the data  
20 processing system to generate an end record report, which serves a "check  
21 sum" function. **Figure 15** is a picture representation of a format for a record  
22 report.

23           STEP EIGHT: In this step, payor **19** transmits payment instructions to  
24 service provider **11**. In the preferred embodiment of the present invention,  
25 payor **19** and service provider **11** are either intermittently or continuously  
26 connected via distributed data processing system (or a simple modem or the  
27 like) in a manner which allows for the communication of the large blocks of  
28 highly formatted data. Where electronic communication over telephone lines,

cellular telephone connections, satellite connections, or microwave connections is not possible, the payment instructions may be copied to magnetic tape and couriered or mailed from payor **19** to service provider **11**. **Figures 17, 18, 19, and 20** depict exemplary data transmissions. Note that the data is arranged utilizing the preselected formats, thus a large amount of data may be transmitted in relatively short, but extensively formatted, communications. **Figure 17** depicts an exemplary data transmission from an oil and gas company. **Figure 19** depicts an exemplary communication from a governmental agency. **Figure 20** depicts an exemplary communication from a publicly traded company. **Figure 18** relates the format of the data to particular bits in the data communication.

**STEP NINE:** In this step, payor **19** communicates payment information substantially contemporaneously to trusted intermediary financial institution **13**. In accordance with the present invention, the transmission is preferably communicated over a distributed data processing system, but may also be communicated utilizing a simple modem or the like. When telephone, cellular, satellite, or microwave communication is not possible, a magnetic tape may be couriered or mailed from payor **19** to trusted intermediary financial institution **13**. Specifically, the information communicated by payor **19** to trusted intermediary financial institution **13** is an approved pay sheet. **Figure 21** is a picture representation of a report format for an approved pay sheet which is communicated by payor **19** to trusted intermediary financial institution **13**. **Figure 22** is a flowchart depiction of data processing implemented steps of generating and utilizing the approved pay sheet information.

**STEPS TEN AND ELEVEN:** In these steps, service provider **11** receives payment instructions from a plurality of payors (such as payor **19**, payor **21**, payor **23**). Service provider **11** utilizes its data processing system to sort the records of payment obligations in order to aggregate all of the payments due

1 to a particular payee (such as payee 29) even though those obligations  
2 originate from different payors. In other words, service provider 11 may  
3 accumulate the payment obligations of dozens or hundreds of payors, and sort  
4 them in a manner which arranges the payment obligations by the identity of the  
5 payees. There may be thousands of payees. The payment information can be  
6 consolidated in this manner to obtain significant economies of scale and other  
7 business efficiencies which are not present when individual payors attempt to  
8 meet there individual payment obligations.

9 STEP TWELVE: In this step, service provider 11 generates a positive pay  
10 report which is directed to trusted intermediary financial institution 13,  
11 preferably electronically, utilizing either a distributed data processing system or  
12 intermittent connection like that available with conventional modems. If such  
13 intermittent or continuous electronic communication is not possible, a magnetic  
14 tape may be couriered or mailed from service provider 11 to trusted  
15 intermediary financial institution 13. Figure 23 is a picture representation of a  
16 format report for the positive pay report. Figure 24 is a flowchart  
17 representation of the data processing implemented steps of generating and  
18 utilizing a positive pay report.

19 STEP THIRTEEN: In this step, service provider 11 generates and  
20 communicates negotiable instruments (such as checks) to the plurality of  
21 payees, including payee 27. Each negotiable instrument or check includes a  
22 printed record of the payment obligations being satisfied by the single  
23 negotiable instrument. Figures 27, 28, and 29 provide examples of the types  
24 of check reports or "check stubs" which can be generated in accordance with  
25 the present invention, and which consolidate payment information from a  
26 variety of different payor entities, while simultaneously directing a negotiable  
27 instrument to a single payee, such as payee 27.

1 STEP FOURTEEN: In this step, payee 27 tenders the negotiable  
2 instrument received from serviced provider 11 to its bank 47 .

3 STEP FIFTEEN: In this step, the bank 47 presents the negotiable  
4 instrument to trusted intermediary financial institution 13 in a conventional  
5 manner. This is typically accomplished utilizing automated clearing houses,  
6 which are not shown, to simplify the description.

7 STEPS SIXTEEN AND SEVENTEEN: In these steps, throughout a  
8 business day, trusted intermediary financial institution 13 utilizes its own data  
9 processing system to record and accumulate the presentations of negotiable  
10 instruments for payment. In Step Sixteen, the trusted intermediary financial  
11 institution 13 compares each presentment against the positive pay records  
12 provided by service provider 11. Then, utilizing the virtual check numbers,  
13 trusted intermediary financial institution 13 compares each portion of a  
14 negotiable instrument presented for payment with the approved pay sheets  
15 provided by the payors. Of course, a single negotiable instrument likely  
16 represents payment from a plurality of payors, and thus requires that the  
17 trusted intermediary financial institution be able to quickly and efficiently  
18 compare the virtual check numbers and amounts with all the approved pay  
19 sheets provided by the payor entities for the time interval in question. Once  
20 each negotiable instrument has been cleared with both the positive pay sheet  
21 and the approved pay sheets, the transaction is recorded in memory, in  
22 accordance with Step Seventeen, for reporting to the payors.

23 STEPS EIGHTEEN, NINETEEN, TWENTY, and TWENTY-ONE: In these  
24 steps, trusted intermediary financial institution 13 utilizes conventional  
25 electronic funds transfers or E.D.I.B.A.N.X. transfers in order to pull funds from  
26 the accounts of the payor entities (in accordance with Step Eighteen), and  
27 deposit funds in the disbursement account of service provider 11 (in  
28 accordance with Step Nineteen). As an alternative, funds may be transferred

1 directly from the accounts of the payees, so that funds are never passed  
2 through the account of the service provider, thus maximizing security. The  
3 negotiable instruments are then honored by the trusted intermediary financial  
4 institution. In accordance with Step Twenty, the disbursement account of  
5 service provider 11 is debited by trusted intermediary financial institution for  
6 the appropriate amount necessary to cover the authorized payment. Then, in  
7 accordance with Step Twenty-One, trusted intermediary financial institution  
8 transfers funds to the payee's bank in a conventional manner, through a  
9 conventional automated clearing house. In accordance with the present  
10 invention, Steps Nineteen and Twenty occur substantially simultaneously. In  
11 this manner, service provider 11 has only momentary possession of the funds  
12 which are utilized to satisfy the payment obligations represented by many  
13 negotiable instruments which have been presented to trusted intermediary  
14 financial institution 13 throughout the course of a business day. In essence,  
15 the account of service provider 11 is a mere shell which allows for payment  
16 activities to push and pull funds to and from it in order to satisfy the payment  
17 obligations which have been cleared with both the positive pay sheet and the  
18 approved pay sheets.

19 STEP TWENTY-TWO: In this step, the data which has been recorded by  
20 the data processing system of trusted intermediary financial institution 13 is  
21 communicated (preferably electronically) to payor 19. The payors are then able  
22 to confirm that payments have been made. Additionally, the payors are in a  
23 position to answer questions from the payees concerning the payments.

24 Figures 5, 6, and 7 are pictorial representations of exemplary  
25 authorizations which may be obtained from the plurality of payor entities 15 by  
26 service provider 11, which allows service provider 11 to make payments on  
27 behalf of the plurality of payor entities 15 to a plurality of payee entities 17.  
28 Figure 5 depicts an exemplary authorization for the oil and gas industry. Figure

1       **6** depicts an exemplary authorization for governmental entities. **Figure 7**  
2 depicts an exemplary authorization for dividend payments. The authorization  
3 pages of **Figures 5, 6, and 7** may be generated as an electronic document in a  
4 particular data processing system, such as data processing system **210** of  
5 **Figure 3**, and then may be communicated electronically through a distributed  
6 data processing system, such as that depicted in **Figure 2** from service provider  
7 **11** to a particular one of the plurality of payor entities **15** to service provider  
8 **11**. The authorization document grants the authorization to make payments of  
9 a particular kind, in accordance with payment instructions which are provided  
10 by the payor entity. In the context of oil and gas revenue distribution, which  
11 is depicted in **Figure 5**, the authorization document **311** includes a title **313**,  
12 and a statement of purpose **315**. Additionally, a textual authorization **317** is  
13 provided which authorizes the service provider **11** to make payments on behalf  
14 of a particular payor (Exxon Company, USA) in accordance with an approved  
15 pay sheet. The authorization document **311** includes a signature block **319**,  
16 plus bank account information. If authorization document **311** is  
17 communicated electronically via a distributed data processing system, the  
18 signature portion and date portion of signature block **319** will include an  
19 electronic signature and a computer-generated time-and-date stamp, using  
20 conventional technologies.

21       The authorization document **321** of **Figure 6** pertains to the disbursement  
22 of funds from government entities, and may be particularly useful for the  
23 authorization of the disbursement of funds for entitlement programs. As is  
24 shown in **Figure 6**, the authorization document **321** includes a title portion **313**,  
25 a statement of purpose **315**, a detailed authorization **317**, plus bank account  
26 information, and a signature block **319**.

27       **Figure 7** depicts the utilization of the present invention for the payment  
28 of corporate dividends on investment instruments such as stocks.

1 Authorization document **23** includes title portion **313**, a brief statement of  
2 purpose **315**, a detailed authorization **317**, plus bank account information and  
3 a signature block **319**.

4 The approved pay sheet identified in the exemplary documents of **Figures**  
5 **5, 6, and 7** corresponds to the "payment instructions" which are  
6 communicated from a particular one of the plurality of payor entities **15** to the  
7 service provider **11**. Preferably, such payment instructions include at least (1)  
8 an identification of each of the plurality of payee entities **17**; (2) an  
9 identification of payment amounts for each of the plurality of payee entities;  
10 and (3) a payment record identifier which is uniquely associated with each  
11 payment amount and which essentially serves as a "virtual check number".  
12 Such payment instructions may be generated in an automated fashion at each  
13 particular payor entity utilizing a data processing system, such as data  
14 processing system **210** which is depicted in **Figure 3**.

15 **Figure 8** is a flowchart representation of a computer program which may  
16 be utilized in assembling payment information for oil and gas revenue  
17 distribution, and provides one example of an automated technique for  
18 generating the payment information from a particular type of payor. In oil and  
19 gas revenue distribution, the payor entity is typically an oil and gas producing  
20 or purchasing company. This company has payment obligations to royalty and  
21 working interest owners in predetermined fractional amounts of the total  
22 revenue. The amounts due vary over time based upon: (1) the amount of oil  
23 and/or gas sold or purchased by the payor, (2) the prices obtained for the oil  
24 and/or gas products which were sold during a period of interest, and (3) the  
25 operating or marketing costs experienced by the payor. An automated  
26 technique for developing the payment information is depicted in **Figure 8**. The  
27 process begins at software block **325**, and continues at software block **327**,  
28 wherein the product sales database is sorted for sales of oil and/or gas in a time



1 interval between  $T_1$  and  $T_2$ . Then, in accordance with software block **329**,  
2 product sales for each property are totaled. Next, in accordance with software  
3 block **331**, a data processing system is utilized to search and sort the record  
4 owners for each property. Typically, these record owners include royalty  
5 interest owners, overriding interest owners, and working interest owners.  
6 Then, in accordance with software block **333**, the record owner's individual  
7 accounts are credited in an amount corresponding to the amount of oil and/or  
8 gas sold for the time interval in question. Then, in accordance with software  
9 block **335**, the data processing system is utilized to sort the credits by record  
10 owners. Next, in accordance with software block **337**, data processing system  
11 **210** is utilized to create a check detail for each record owner. **Figure 11** is a  
12 pictorial representation of an exemplary format for a check detail, in which the  
13 information necessary to identify the property or properties for which payment  
14 is being made is arranged in an efficient manner which allows for automated  
15 handling in accordance with the present invention. Returning now to **Figure 8**,  
16 in accordance with software block **341**, data processing system **210** is utilized  
17 to create an end record for the foregoing information. **Figure 15** is a pictorial  
18 representation of the data format for an end record. The end record  
19 summarizes payment information in a manner which allows the recipient of  
20 information to utilize the end record to perform a "check sum operation" or  
21 alternatively a "hash routine" upon the data transmission. For example, the end  
22 record of **Figure 15** includes an identification of the number of "checks" (that  
23 is, payment obligations) and the distribution total. The recipient of this  
24 electronic payment information can calculate a distribution total and a number  
25 of "checks" in order to verify the accuracy of the data transmission. Next, in  
26 accordance with software block **339**, a check summary is created for each  
27 record owner. Preferably, the check summary includes the identifying  
28 information for each oil and/or gas property from which a payment is due. For  
29 example, a particular individual may be due payments for the sale of oil and/or  
30 gas from multiple properties for which the payor entity has payment obligation

1 which are operated by the payor entity. Preferably, all of these amounts due  
2 are organized together in an efficient manner. **Figure 9** is a pictorial  
3 representation of a format report for an exemplary format for a check summary.  
4 The check summary formatted in accordance with **Figure 9** contains the  
5 essential information which allows a payor to communicate payment  
6 instructions to service provider **11**.

7 Returning now to **Figure 8**, data processing system **210** is utilized to  
8 transfer the data in accordance with software block **343**, preferably utilizing the  
9 distributed data processing system depicted in **Figure 2**. The process ends at  
10 software block **345** wherein service provider **11** has received and confirmed the  
11 accuracy of the payment information received from a particular one of the  
12 plurality of payor entities **15**. Of course, service provider **11** will receive regular  
13 communications of payment information from all of the plurality of payor  
14 entities in a prearranged periodic fashion.

15 The data which is communicated from the plurality of payors **15** to  
16 service provider **11** is in the form of either an alphanumeric or a numeric block  
17 of data. **Figure 17** is a pictorial representation of a sample data transmission  
18 from Exxon Company, USA. The data communication **801** includes a data  
19 block **805**. Within this data block **805**, particular fields are dedicated for  
20 particular types of data, as will be explained in greater detail with reference to  
21 **Figure 17** and **Figure 18**. **Figure 19** is a pictorial representation of a data  
22 communication **831** from a governmental entity payor to a service provider, and  
23 includes a data block **837**. Likewise, a plurality of fields are defined within the  
24 data block and are dedicated to particular types of data. **Figure 20** is a pictorial  
25 representation of a data block from Ford Motor Company. Data communication  
26 **861** includes a data block **865**. Likewise, this data block includes a plurality  
27 of fields which are dedicated for particular types of data.

1 With reference again to **Figure 8**, the check summary for each payment  
2 in the payment instructions includes data which is arranged in accordance with  
3 the fields which are set forth in **Figure 9**. The format report **401** of **Figure 9**  
4 includes a title section **403**, a page field **405**, a date field **407**, date of creation  
5 fields **409**, **411**, and date of last change fields **413**, **415**. The check summary  
6 includes alphanumeric characters which represent particular information in  
7 accordance with the pre-defined convention.

8 The data block of the check summary report is defined by the table  
9 displayed in **Figure 9**. Each data field can be defined by its position, length,  
10 and content in accordance with this tabular display. "Position" column **417**  
11 defines the position of the data fields, and "length" column **419** defines the  
12 length of the data fields. The "data element" column **421** defines the type of  
13 data contained within the field, and the "data type" column **423** defines  
14 whether the field is numeric or alphanumeric. The "notes" column **425**  
15 provides miscellaneous information relating to the field. As can be seen from  
16 this tabular display, the first data field is an "industry code" which is located  
17 in the first and second characters of the data block, and which has a field  
18 length of two characters. As can be seen from the "data type" column **423**,  
19 these characters may be alphanumeric. Utilization of an industry code allows  
20 the service provider to service a variety of industries, yet maintain the data in  
21 a manner which can be searched easily by industry types. The next piece of  
22 information is a "record type" which is in the third and fourth character  
23 positions, and which is two characters long. As can be seen from **Figure 9**, the  
24 "record type" typically will include alphanumeric data. The next piece of  
25 information is a "company code" which is kept in the fifth, sixth, and seventh  
26 character positions, and which is three characters in length. As can be seen  
27 from **Figure 9**, the "company code" is an alphanumeric representation of a  
28 company.

1           The next piece of information is a "serial number" which is maintained  
2 in the eighth through twenty-second character position in the data block, and  
3 which is fifteen characters in length. As can be seen from Figure 9, the "serial  
4 number" is alphanumeric. The "serial number" serves the same function as a  
5 "virtual check number". In other words, the serial number identifies a payment  
6 obligation which would have ordinarily resulted in the generation of a printed  
7 check which would have been mailed to a particular payee. Since the primary  
8 objective of the present invention is to consolidate payment obligations and to  
9 tender fewer, and better organized, payments, the serial number serves now  
10 to represent a payment obligation which will be, or which has been, satisfied,  
11 but which is not likely to be separately identifiable as a negotiable instrument.  
12 In other words, when multiple payment obligations are grouped together and  
13 a single negotiable instrument is generated, a plurality of serial numbers may  
14 be represented by the negotiable instrument.

15           The next piece of information contained in the check summary is a  
16 "payee code" which is located in character positions twenty-three through  
17 thirty-two, and which is ten characters in length. As can be seen from Figure  
18 9, the "payee code" is alphanumeric data. The "payee code" identifies the  
19 particular payee in a pre-defined manner. Preferably, a directory is established  
20 with "company codes" and "payee codes" mapped to a full identification of  
21 either a payor or a payee. The next piece of information in the data block is a  
22 "check amount" which is maintained in character positions thirty-three through  
23 forty-seven, and which is fifteen characters in length. The "check amount" will  
24 ordinarily be numeric data only. The check amount represents a payment  
25 obligation which would have ordinarily resulted in the generation of a negotiable  
26 instrument. In accordance with the present invention, this particular check  
27 amount may be grouped with other payment obligations and tendered to a  
28 particular payee in a single negotiable instrument. Like the "serial number"  
29 information, the "check amount" information allows the payor entity to

1 maintain good and accurate internal records about the payment obligations and  
2 the satisfaction of those payment obligations. Other types of fields containing  
3 other types of information may be included in the check summary. The  
4 exemplary check summary of **Figure 9** provides some of the most basic and  
5 essential components of the payment information. **Figure 26** is a data  
6 dictionary which more carefully defines the meaning and content of the data  
7 elements of the check summary (and other) reports.

8 **Figure 10** is a flow chart depiction of a data processing implemented  
9 generation of a check summary. The process begins at software block **431** and  
10 continues as at software block **433**, wherein a particular check summary  
11 format is selected. It is important to bear in mind that the check summary  
12 depicted in **Figure 9** is merely exemplary, and that other types of check  
13 summary reports could be utilized to convey the essential information necessary  
14 for a payment instruction. Next, in accordance with software block **435**, the  
15 date and change records are retrieved to allow proper dating and version control  
16 of the electronic documents created in accordance with this technique. Then,  
17 in accordance with software block **437**, an initial serial number is retrieved.  
18 This serial number represents the "virtual check number" which is associated  
19 with each payment obligation which is communicated from a particular payor  
20 to the service provider. Next, in accordance with software block **439**, the data  
21 processing system is utilized to perform the following operations for each  
22 subscriber or payor:

- 23 1. generate an industry code for the payor;
- 24 2. generate a record type for the record;
- 25 3. generate or retrieve the company code which identifies the payor;
- 26 4. load or record the serial number to the serial number field (this  
27 corresponds to the virtual check number);
- 28 5. retrieve the payee code (which is preferably, but not necessarily,  
29 at least a tax identification number) which identifies the particular

- 1 payee associated with the particular payment obligation; and  
2 6. record the check amount to the check amount field.

3 In accordance with step **441**, the serial number (or virtual check number)  
4 is incremented. Next, in accordance with software block **443**, the data  
5 processing system determines if there are other payees that have not yet been  
6 processed. If so, the process returns to software block **439**; if not, the process  
7 continues as software block **445**, wherein the data is saved to a file. The data  
8 that is saved is a highly condensed record of the information necessary to make  
9 the payments. In this format, the information can be communicated efficiently,  
10 quickly, and at a low cost from the payor entities to the service provider. Since  
11 the information is maintained in dedicated fields, instruction operations are  
12 greatly facilitated, and the service provider can efficiently organize and  
13 manipulate data in a manner which facilitates its internal operations. For  
14 example, the service provider may be a "virtual entity" with facilities distributed  
15 in a variety of geographic locations. The data processing and check printing  
16 operations can be performed at a number of locations in a coordinated manner  
17 to allow the service provider to avail itself of low cost operations in rural or  
18 remotely located regions.

19 **Figures 11, 12, and 13** are pictorial representations of a format report  
20 which is suitable for generating a check detail for oil and gas revenue  
21 distributions, government agency distributions, and stock dividend distributions,  
22 respectively. These formats define blocks of data which can be rapidly and  
23 easily transmitted via telephone lines or a distributed data processing system.  
24 Alternatively, the blocks of data can be recorded to a magnetic or optical  
25 memory media and physically transported.

26 Referring first to **Figure 11**, the format report **501** includes a title field  
27 **503**, page and date fields **505, 507**, creation fields **509, 511**, and change

1 record fields **513, 515**. The format report **501** includes a tabular display of  
2 data elements and includes information about the relative position of the data  
3 elements, the lengths of the data elements, the content of the data elements,  
4 the types of characters present in particular fields, and miscellaneous notes.  
5 This information is organized in column form in format report **501**. The  
6 columns include a "position" column **517**, a "length" column **519**, a "data  
7 element" column **521**, a "data type" column **523**, and a "notes" column **525**.  
8 Position column **517** defines the position of the data fields, and the length  
9 column **519** defines the length of the data fields. The data element column  
10 **521** defines the type of data contained within the field, and the data type  
11 column **523** defines whether the field is numeric or alphanumeric. The notes  
12 column **525** provides miscellaneous information relating to the field.

13 As can be seen from this tabular display, data field **529** is an "industry  
14 code" field which is two characters of alphanumeric data in the first and  
15 second field position which identifies the particular industry. As identified in  
16 the notes column **525**, for oil and gas revenue distributions, this industry code  
17 is "OG". Data element **531** is a "record type" data element which is two  
18 characters long, and which occupies the third and fourth character positions in  
19 the data block. The data is alphanumeric. For oil and gas revenue  
20 distributions, the record type must be identified as "CD". Data element **533** is  
21 a "company code" which is three characters long and which occupies character  
22 positions 5-7. The company code is preferably alphanumeric. Data element  
23 **535** is a "serial number" which identifies the payment obligation, and which is  
24 fifteen characters in length and which occupies character positions 8-22 in the  
25 data block. Data element **537** is a "payee code" which occupies the ten  
26 characters in positions 23-32. Data element **539** is a "property code" which  
27 occupies the fifteen characters in the data block in positions 33-47. The data  
28 element **541** is a "sales start date" which occupies the four characters in  
29 positions 48-51. Data element **543** is a "sales end date" which occupies the

four characters in positions 52-55. Data element **545** is a "product code" which occupies the two characters 56-57. Data element **547** is a "transaction code" which occupies the two characters in positions 58-59. Data element **549** is a "owner decimal" which occupies the ten characters in positions 60-69. Data element **551** is an "interest type" which occupies two characters in positions 70-71. Data element **553** is a "detail amount" which occupies fifteen characters in positions 72-86.

**Figure 12** depicts a format report **557** for a check detail for utilization in the satisfaction of government agency obligations. Format report **557** includes title field **559**, page and date fields **561**, **563**, date of creation fields **565**, **567**, and change record fields **569**, **571**. As is shown, position column **573**, length column **575**, data element column **577**, data type **579**, and notes column **581** are provided to display in tabular form a format which may be utilized to rapidly and easily transmit details necessary for the satisfaction of governmental agency obligations. As is shown, data element **585** is dedicated to identify an industry code. For federal governmental distributions, the alphanumeric designators "US" must be utilized. Data element **587** is dedicated to identify a record type. Data element **589** is dedicated for identification of an agency code. The agency code may be an alphanumeric designation of a governmental agency. Data element **591** is dedicated to identify a serial number for the transaction. Data element **593** is dedicated to identify a payee code. Data element **595** is dedicated to identify a reference code. Data element **597** is dedicated to identify a payment start date. Data element **599** is dedicated to identify a payment in date. Data element **601** is dedicated to identify the transaction. Data element **603** is dedicated to identify a detail amount.

**Figure 13** is a pictorial representation of format report **605** for a check detail for utilization in stock dividend distributions. Format report **605** includes title field **607**, page and date fields **609**, **611**, date of creation fields **613**, **615**,



change record fields **617**, **619**. Additionally, format report **605** includes position column **621**, length column **623**, and data element column **625**, data type column **627**, and notes column **629**. Data element **631** identifies an industry code. For stock dividend distributions, an alphanumeric character of "WS" may be utilized to identify "wallstreet" transactions. Data element **533** identifies a record type. Data element **535** identifies a company code. Data element **537** identifies a serial number which corresponds to the payment obligation, which would have ordinarily resulted in the generation of a printed check. Data element **639** identifies a payee code. Data element **641** identifies a reference code. Data element **643** identifies start date. Data element **645** identifies an end date. Data element **647** identifies detail amount. It is important to bear in mind that the check detail depicted in **Figure 9** is merely exemplary, and that other types of check summary reports could be utilized to convey the essential information necessary for a payment instruction.

**Figure 14** is a flowchart representation of a computer program utilized to generate data for the check detail in accordance with the format reports **501**, **557**, or **605** of **Figures 11**, **12**, and **13**. The process commences at software block **651**, and continues at software block **653**, wherein the computer program prompts the operator to select either a regular run or an irregular run. In the context of the present invention, a regular run constitutes the usual and customary accounting interval. For example, for governmental agency distributions, the customary accounting period may be calendar months, while for stock dividend distributions, the regular accounting period may constitute financial quarters, which may or may not coincide with calendar quarters. In accordance with the present invention, the operator is allowed to initiate payments in cycles other than the usual customary cycles by selecting the "irregular run" option in step **653**. Next, in accordance with software block **655**, the operator is prompted to select a particular report format. Then, in accordance with software block **657**, the operator is prompted to define the

1 accounting interval question from a beginning time point  $T_b$  to an ending time  
2 point  $T_e$ . Then, in accordance with software block **661**, the data processing  
3 system compiles payment records for the selected accounting interval, and  
4 saves those payment records in accordance with software block **663**. The  
5 process ends at software block **665**.

6       **Figures 17, 18, 19, and 20** depict and describe sample data  
7 transmissions which include the data blocks generated in accordance with the  
8 format reports of **Figures 11, 12, and 13**, as well as the flowchart  
9 representation of the computer software implemented to generation of the data  
10 blocks of **Figure 14**. **Figure 17** is a sample data transmission **801** from Exxon  
11 Company, USA for oil and gas revenue distributions. **Figure 18** provides a  
12 detail view of the first ten bits in the sample data transmission of **Figure 17**.  
13 As is shown, bits 1 and 2 are dedicated for the industry code. Since this is an  
14 oil and gas distribution, the industry code is "OG". Bits 3 and 4 are dedicated  
15 to identify the record type. In this particular instance, the record type "CD"  
16 indicates that the data transmitted in this line are check detail data. Bits 5, 6,  
17 and 7 are dedicated to identify the company code. As is shown, the letters  
18 "XON" are utilized to identify "Exxon Company, USA". Bits 8, 9, and 10 are  
19 the first three bits of a serial number which is utilized to identify the payment  
20 transaction to be made on behalf of Exxon Company, USA through the  
21 collaborative efforts of a service provider **11** and a trusted intermediary  
22 financial institution **13**.

23       **Figure 19** is a sample data transmission **831** from the United States  
24 Department of Health and Human Services. As is shown, sample data  
25 transmission **831** includes a data block **837** which identifies the payments to  
26 be made by the coordinated efforts of service provider **11** and trusted  
27 intermediary financial institution **13** on behalf of the Department of Human  
28 Services. **Figure 20** is a sample data transmission **861** from Ford Motor

1 Company. A data block **865** is defined by the format report **605** of **Figure 13**  
2 for stock dividend distributions as well as the software of **Figure 14**.

3 In accordance with the present invention, each of the data blocks is  
4 concluded by an end record report which can be utilized in the manner of a  
5 "check sum" to verify the accuracy of the transmission. **Figure 15** is a pictorial  
6 representation of a format report **701** for an end record, which may be utilized  
7 in oil and gas revenue distributions, governmental and entitlements  
8 distributions, or stock dividend distributions. As is shown in **Figure 15**, the  
9 format report **701** includes a title field **703**, page and date fields **705**, **707**, a  
10 date of creation fields **709**, **711**, and change record fields **713**, **715**. As is  
11 shown, the data elements which make up an end record are defined by the  
12 tabular display of format report **701**. The table includes position column **717**,  
13 length column **721**, data element column **723**, data type column **725**, and  
14 notes column **727**. Data element **727** is a two-bit alphanumeric industry code.  
15 Data element **731** is a two-bit alphanumeric record type. Data element **731** is  
16 a three-bit alphanumeric company code. Data element **733** is a ten-bit numeric  
17 indicator of the total number of "checks" represented by the data transmission.  
18 In other words, data element **733** identifies the total number of payment  
19 obligations which would be satisfied by payment in accordance with the  
20 instructions contained within the data block. Data element **735** is a fifteen-bit  
21 numeric total of the distribution total of all the payments identified and  
22 authorized by the transmission. Data element **737** is a six-bit numeric  
23 transmission date. Data element **739** is a six-bit numeric transmission time.

24 **Figure 16** is a flowchart representation of the software utilized to  
25 generate an end record like that defined by the format report **701** of **Figure 15**.  
26 The process begins at software block **751**, and continues at software block  
27 **753**, wherein a particular end record format is selected by an operator;  
28 however, in alternative embodiments, this may not be explicitly or interactively

1 selected. Then, in step **755**, a compiled data set is selected for end record  
2 generation. Then, in accordance with software block **757**, for each compiled  
3 data set, an industry code is generated, a record type is generated, a company  
4 code is retrieved, the number of "virtual checks" (that is, payment obligations)  
5 is recorded, the numeric total of the payment obligations is calculated and  
6 recorded, and the time and date are recorded from a time-and-date clock  
7 resident in the data processing system. Then, in accordance with software  
8 block **759**, the compiled data set is combined with the end record. Preferably,  
9 in accordance with software block **761** a cryptographic routine is selected, and,  
10 in accordance with software block **763**, is performed upon the compiled data  
11 set and end record. Then, in accordance with software block **765**, the  
12 encrypted record is recorded, and the software routine ends at software block  
13 **767**.

14 In accordance with the present invention, the plurality of payor entities  
15 **15** (of **Figure 1**) provide to the trusted intermediary financial institution **13** a  
16 report which identifies approved payments. This document or electronic  
17 communication may be characterized as an "approved pay sheet", and includes  
18 an authorization code which authorizes the trusted intermediary financial  
19 institution **13** to honor negotiable instruments or initiate electronic fund  
20 transfers. **Figure 21** is a pictorial representation of a format report **901** for an  
21 approved pay sheet which is communicated by any particular one of the  
22 plurality of payor entities **15** to the trusted intermediary financial institution **13**.  
23 As is shown, the format report includes title field **903**, page and date fields  
24 **905**, **907**, date of creation fields **909**, **911**, and change record fields **913**, **915**.  
25 The data elements contained in the approved pay communication are defined  
26 with respect to the table set forth in format report **901**, and in particular with  
27 reference to the following columns: position column **917**, length column **919**,  
28 data element column **921**, data type column **923**, and notes column **924**. Data  
29 element **927** is a two-bit alphanumeric industry code. Data element **927** is a

two-bit alphanumeric record type. Utilization of the code "AP" identifies this record as an approved pay record. Data element 929 is a three-bit alphanumeric company code which identifies the company making the payment. Data element 931 is a fifteen-bit alphanumeric serial number which identifies the payment or payments being made on behalf of the company. Data element 933 is a fifteen-bit alphanumeric authorization code which is known only by the payor entity and the trusted intermediary financial institution, and which is not known by the service provider. Data element 935 is a ten-bit alphanumeric payee code which identifies the payee entity, preferably by tax identification number. Data element 937 is a fifteen-bit numeric payment amount which represents the total of the payments made on behalf of the payor entity to the payee entity.

Figure 22 is a flowchart representation of a computer program which may be utilized to generate an approved pay sheet like that described by the format report of Figure 21. The process begins at software block 951, and continues at software block 953, wherein a particular subscriber (the sender of the approved pay sheet) and the trusted intermediary financial institution interface or interact to select an approved pay format. Next, in accordance with software block 955, at defined intervals, the subscriber transmits an approved pay sheet, and for each payment provides:

- (1) identification of the record type;
- (2) identification of the company by utilization of a company code;
- (3) identification of the payment obligation by utilization of a virtual check number which is also known as a "serial number";
- (4) a confidential authorization code which is known only by the subscriber and the trusted intermediary financial institution, and which is not known by the service provider;
- (5) a payee code which uniquely identifies the recipient of the

1 payment or payments; and  
2 (6) the payment amount.

3 Next, in accordance with software block **957**, the approved paysheet is  
4 held by the trusted intermediary financial institution until a "presentment" of a  
5 negotiable instrument occurs. The process ends at step **959**.

6 accordance with software block **961**, a payment record is developed and  
7 recorded for each transaction. Then, an electronic funds transfer is initiated  
8 with the payment record appended, for all electronic funds transfers requested  
9 during that banking day.

10 In order to minimize the occurrence of fraud through the alteration of  
11 identification of payees or of payment amounts, a positive pay report may be  
12 communicated from service provider **11** (of **Figure 1**) to trusted intermediary  
13 financial institution **13** (also **Figure 1**). **Figure 23** is a format report **1001** for  
14 a positive pay report. As is shown, the format report **1001** includes title field  
15 **1003**, page and date fields **1005**, **1007**, date of creation fields **1009**, **1011**,  
16 change record fields **1013**, **1015**. The information of the positive pay report  
17 is formatted in accordance with the table of format report **1001**. The table  
18 includes position column **1017**, length column **1019**, data element column  
19 **1021**, data type column **1023**, and notes column **1025**. Data element **1029**  
20 is an eight-bit alphanumeric check number, which identifies the negotiable  
21 instrument provided by service provider **11**. Data element **1031** is a fifteen-bit  
22 numeric check amount which identifies the total amount of the payment being  
23 made by service provider **11** to a particular one of the plurality of payees **17**.  
24 Data element **1033** is a sixty-bit alphanumeric payee identifier, which identifies  
25 the name of the entity receiving the payment. Data element **1035** is a three-bit  
26 alphanumeric company code which identifies the company making the  
27 payment. Data element **1037** is a fifteen-bit alphanumeric serial number which

elements found in **Figure 23A**, so the same reference numerals are utilized. The check detail record **1008** includes data element **1029** which is a two-bit alphanumeric report code, and data element **1031** which is a two-bit alphanumeric record type code. Furthermore, the format report **1008** includes data element **1039** which is an eight-bit numeric check number, data element **1041** which is a three-bit alphanumeric company code, data element **1043** which is a fifteen-bit alphanumeric serial number, and data element **1045** which is a fifteen-bit numeric check sub amount. This data represents the individual payment obligations which are added together to represent the check amount of the report of **Figure 23A**. Of course, a variety of payment obligations may be represented in a single check, so the data elements are repeating to identify all further payment obligations which have associated company codes, serial numbers (virtual check numbers), and check sub amounts.

**Figure 23C** is similar to **Figures 23A** and **23B** and provides a format report **1018** for positive pay end records. Since many of the data elements are similar to those found in **Figures 23A** and **23B**, similar reference numerals are utilized. The format report for the positive pay end record includes data element **1029** which is a two-bit alphanumeric report code, data element **1031** which is a two-bit alphanumeric record type, data element **1047** which is a ten-bit numeric number of checks indicator, data element **1049** which is a fifteen-bit numeric distribution total, data element **1051** which is a six-bit numeric transmission date, and data element **1053** which is a six-bit numeric transmission time. As with the other format reports, additional end records may be communicated at the same time and are likewise identified by the number of checks, distribution total, transmission date, and transmission time.

Together, the reports of **Figures 23A**, **23B**, and **23C** maximize security in the payment system of the present invention.

Figure 24 is a flowchart representation of the utilization of the positive pay report, in accordance with one preferred embodiment of the present invention. The process begins at software block 971, and continues at software block 973, wherein the service provider 11 and trusted intermediary financial institution 13 interact to select a positive pay report format, such as the format report 1001 of Figure 23. Next, in accordance with software block 975, at defined intervals, the service provider 11 (of Figure 1) transmits a positive pay report to the trusted intermediary financial institution 13 (of Figure 1), including:

- (1) a check number of a negotiable instrument;
- (2) a check amount for the negotiable instrument;
- (3) an identification of the payee;
- (4) an identification of the payor; and
- (5) for each negotiable instrument, payment obligation(s) with serial number(s), and check sub amount(s), for each payment obligation being satisfied.

The process ends at block 977. In this manner, a plurality of payment obligations may be grouped together and represented by a single negotiable instrument which is presented for payment, and which satisfies a plurality of payment obligations. Service provider 11 (of Figure 1) provides the positive pay report to the trusted intermediary financial institution 13 (of Figure 1) since service provider 11 is charged with the responsibility of combining and coordinating the payment obligations in a manner which efficiently satisfies the payment obligations. As requests for payment are made, for each presentment, the trusted intermediary financial institution verifies payment by comparing the serial number, amount, and payee of the negotiable instrument with the serial number, amount, and payee of approved payments on the positive pay report. Once a negotiable instrument is verified, it is honored, and a payment record is developed and recorded. Figure 25 is a pictorial representation of an example



1 of a positive pay transmission for an oil and gas revenue distribution system.  
2 The lines which includes "CD" correspond to check detail and serve to identify  
3 check numbers, payors, virtual check numbers, and check sub-amounts (in that  
4 order from left to right, with vertical lines utilized to separate items). The line  
5 that includes "CS" corresponds to a check summary and serves to identify  
6 check numbers and check amounts. The line that includes "ER" corresponds  
7 to an end record and serves to identify the number of checks, the number of  
8 virtual checks, and the total of check amounts.

9 The negotiable instruments and electronic funds transfers made by  
10 service provider 11 in coordinated operation with trusted intermediary financial  
11 institution 13 may include a significant amount of detailed and useful  
12 information which is either printed on a check stub or communicated elec-  
13 tronically to the data processing system under the control of the payee entity.  
14 Figures 27, 28, and 29 are pictorial representations of the types of information  
15 which may be included on the check stubs. Turning first to Figure 27, check  
16 stub 1101 includes a introductory header 1103 which identifies the enclosed  
17 (or referenced) check or checks as being made on behalf of the companies  
18 listed below for the particular properties and product sales dates. Preferably,  
19 the payor entities' trademarks are utilized to provide maximum orientation  
20 within the document. In Figure 27, the document identifies payments as being  
21 made on behalf of two payor entities: GPM Gas Corporation and Philbro Energy  
22 USA, Inc. Exxon Company USA The trademarks 1105, 1137 are utilized to  
23 identify those two payor entities. Several payments are made by service  
24 provider 11 on behalf of GPM Gas Corporation. The detail information for each  
25 payment is set forth in tabular form. In Figure 27 rows (1), (2), and (3) define  
26 the three for which payment is being made. The column items include item  
27 number field 1109, operator/lease name field 1111, county/state field 1113,  
28 lease ID/your decimal field 1115, sales date/interest type field 1117,  
29 product/unit price field 1119, lease volume/your volume field 1121, lease

1 value/your value field **1123**, lease tax/your tax field **1125**, lease net/your net  
2 field **1126**. The check stub further includes total fields **1129**, **1131**, **1133**,  
3 **1135** which provide an indication of the total of several of the columns. The  
4 check stub further includes a question/complaint field **1107** which directs  
5 questions to the particular payor entity, and at least provides an address for  
6 such entity.

7 In the example of **Figure 27**, the payment made on behalf of Philbro  
8 Energy USA, Inc. Exxon Company USA includes the Philbro Exxon trademark  
9 **1137**. The payment information is arranged in table form with the item fields  
10 **1157** defining the two properties for which payment is made. The properties  
11 and payments are identified with reference to the columns including item field  
12 **1141**, operator/lease name field **1143**, county/state field **1145**, lease ID/your  
13 decimal field **1147**, sale date/interest type field **1149**, products/unit price field  
14 **1151**, lease volume/your volume field **1153**, lease value/your value field **1154**,  
15 lease tax/your tax field **1155**, lease net/your net field **1156**. The check stub  
16 further includes total fields **1160**, **1159**, **1161**, **1163** which provide appropriate  
17 totals. Additionally, the payment information includes complaint/question  
18 statement **1139** which directs inquiries to Philbro Energy USA, Inc. Exxon  
19 Company USA and provides at least an address for such questions. As is  
20 shown also in **Figure 27**, the virtual check numbers associated with each  
21 payment may also be provided.

22 **Figure 28** is a pictorial representation of check stub **1201** for payments  
23 made on behalf of governmental entities. The header field **1203** identifies the  
24 enclosed checks as representing payment from the governmental agencies  
25 listed below. The agency logos **1205**, **1219**, are utilized to provide maximum  
26 orientation within the document. A header **1207** identifies the first payment  
27 as being made on behalf of the United States Department of Health and Human  
28 Services. The payment information is set forth in tabular form by the account

field **1209**, payment period field **1211**, description field **1213**, and amount field **1215**. Typically, the account is defined by a social security number or similar unique identifier. The payment period is typically a statutory or regulated interval. The description defines the purpose of the payment, and the amount provides the total amount of the payment. In the example of **Figure 28**, the second payment includes a header **1221** which identifies the payment as being made on behalf of the United States Treasury, and arranges the payment information under the account field **1223**, payment period field **1225**, description field **1227**, and amount field **1229**. Multiple types of obligations may be satisfied by this instrument, as demonstrated by the rows **1231** which are utilized to distinguish a refund of overpayment and the interest on the refund as separate amounts for the totals. The totals are identified by total fields **1233**, **1235**.

**Figure 29** is a pictorial representation of a check stub associated with the payment of stock dividends. The check stub **1301** includes a header **1303** which identifies the enclosed check as satisfying the dividend obligations in connection with the particular stock in companies identified below. The logo fields **1305**, **1319** utilize company logos or names to identify the particular payments. The payment fields **1307**, **1321** provide a textual description of the payment or payments. The payment obligations are set forth in column form under the account field **1309**, shares owned field **1311**, dividend/share field **1313**, and amount field **1315**, for Ford Motor Company. Likewise, the dividend obligation for Texas Instruments shares is set forth under account field **1323**, shares owned field **1325**, dividend/share field **1327**, and amount field **1329**.

**Figure 30** is a flowchart representation of a data processing implemented verification operation, wherein a negotiable instrument is received and a determination is made whether or not to honor the request for payment. The process begins at software block **1411**, and continues to software block **1413**,

wherein a negotiable instrument is received by the trusted intermediary financial institution 13, and the determination must be made whether or not to honor the negotiable instrument. To begin with, the positive pay information is retrieved for the negotiable instrument. The positive pay information was provided by service provider 11, and includes at least an identification of the check number and the amount of the payment. In accordance with software block 1415, the positive pay information is examined and compared to the information contained on the face of the negotiable instrument to determine whether or not to honor the instrument. If the positive pay information is inconsistent with the information carried by the negotiable instrument, the process continues at software block 1417, wherein the negotiable instrument is dishonored, and the process continues at software block 1419 by ending. However, if the operation of software block 1415 determines that the positive pay information is indeed satisfied by the negotiable instrument, the process continues at software block 1421, wherein the payment record identifiers associated with the particular negotiable instruments are retrieved. As stated above, a particular negotiable instrument is likely to represent payment for a number of payment obligations. Each payment obligation has associated with it a payment record identifier which identifies the payment, and which serves as a "virtual check number". Each payment record identifier carries with it at least the amount of the payment. The positive pay report provided by service provider 11 will include identification of all the payment record identifiers associated with the negotiable instrument. Each one of these payment record identifiers is retrieved from memory, and a comparison is made of the total of the amounts represented by the payment record identifiers. In other words, the total amount of the payment must also match. In accordance with the present invention, the payment record identifiers may be from a plurality of payor entities. Therefore, the data processing system of the present invention must quickly and efficiently retrieve the payment record identifiers from a plurality of payment information and payment authorization communications from the

1 payors. If the totals also match, the process continues. The comparison of the  
2 total of accumulated amounts for the payment record identifiers is represented  
3 in flowchart form at software block **1423**. If the information is consistent, the  
4 process continues at software block **1425**. If the information is inconsistent,  
5 the process continues at software block **1417**, wherein the negotiable  
6 instrument is dishonored. In software block **1425**, the data processing system  
7 is utilized to determine whether electronic funds transfers have been  
8 authorized. In accordance with the present invention, each payment record  
9 identifier has associated with it an authorization code. Electronic fund transfers  
10 can occur only if the authorization code is present. The authorization code  
11 allows for the secure communication between the trusted intermediary financial  
12 institution **13** and the plurality of payor entities, should some question arise  
13 about payment. A payment authorization is necessary for payment to be made.  
14 If in step **1425**, it is determined that there is no authorization, the process  
15 continues at software block **1417**, wherein the negotiable instrument is  
16 dishonored; however, if it is determined in software block **1425** that  
17 authorization is present, the process continues at software block **1427**, wherein  
18 the data processing system is utilized to record and accumulate the  
19 transactions for a defined interval. In accordance with the present invention,  
20 authorized electronics funds transfers are accumulated for a business day. At  
21 the end of the business day, a single electronics fund transfer occurs, thus  
22 minimizing the costs associated with transferring funds electronically. This  
23 process is depicted graphically in the flowchart of **Figure 30** in software block  
24 **1429**, wherein the data processing system determines whether or not the  
25 transaction period has ended; if the transaction period has not ended, the  
26 process continues at software block **1427**; however, if the transaction period  
27 has ended, the process continues at software block **1431**, wherein the data  
28 processing system is utilized to perform a conventional electronic funds transfer  
29 between each particular payor and the service provider **11**. A single electronic  
30 fund transfer may represent several authorized transfers for a particular payor.

1 The process ends at software block **1433**, wherein the bank account for  
2 service provider **11** is funded in an amount sufficient to satisfy the negotiable  
3 instruments presented during the business day. In accordance with the present  
4 invention, the bank account for the service provider is immediately debited for  
5 the amount of the negotiable instruments, and payment is tendered through the  
6 banking chain in a conventional manner. In accordance with the present  
7 invention, the service provider **11** has only momentary possession of the funds,  
8 so the possibility of fraudulent or illegal activities is minimized. As an additional  
9 benefit, the payors maintained possession and control of their funds until the  
10 negotiable instruments must be honored. In this manor, the payors may utilize  
11 the capital represented by these amounts in an efficient manner.

12 **Figure 31** is a flowchart representation of a data processing implemented  
13 confirmation report provided by trusted intermediary financial institution **13** to  
14 each of the plurality of payor entities. The process begins at software block  
15 **1511**, and continues at software block **1513**, wherein the transaction records  
16 with the interval in question are retrieved. In accordance with the present  
17 invention, satisfaction of the payment obligations is preferably reported in a  
18 predetermined periodic manner. For example, the confirmation report may be  
19 submitted daily, weekly, or monthly from the trusted intermediary financial  
20 institution **13** to each of the plurality of payor entities. The process continues  
21 at software block **1515**, wherein trusted intermediary financial institution **13**  
22 utilizes its data processing system to sort the payment records by payment  
23 record identifier. As identified above, the payment record identifier represents  
24 the payors "virtual check number" for each payment obligation. In accordance  
25 with software block **1517**, the trusted intermediary financial institution utilizes  
26 a data processing system to relate the payment record identifiers to (1) the  
27 negotiable instrument number; (2) the negotiable instrument payment date;  
28 (3) the electronic funds transfer transaction identifier, which identifies the  
29 particular electronic funds transaction which satisfy the particular obligation;

1 (4) the negotiable instruments number; (5) the amount for each payment record  
2 identifier; and, optionally, (6) payee identification. These items are preferably  
3 formatted in an agreed upon manner communicated to each of the plurality of  
4 payor entities in accordance with software block 1519. The process ends at  
5 software block 1521, wherein the plurality of payor entities receive the  
6 electronic communication which confirms satisfaction of payment obligations.  
7 The plurality of payor entities may update its internal records utilizing the  
8 payment record identifiers in order to indicate that the payment obligations  
9 have been satisfied. This allows the plurality of payor entities to maintain  
10 accurate books, even though the negotiable instruments were not generated by  
11 the plurality of payor entities.

12 In an alternative embodiment of the present invention, payment  
13 information may be consolidated and delivered by one or more information  
14 service providers, while the payment obligations are directly satisfied by the  
15 plurality of payor entities. The service provider may be utilized to consolidate  
16 and deliver payment information from a plurality of payor entities to a plurality  
17 of payee entities, even though the service provider does not perform payment  
18 activities on behalf of the plurality of payee entities. This provides a significant  
19 advantage over the prior art, insofar as it allows the plurality of payor entities  
20 to satisfy financial obligations, without personally satisfying the associated  
21 reporting obligation. This minimizes the administrative and other costs  
22 associated with making of payments, and thus allowing the payor entities to  
23 efficiently "outsource" the reporting obligations, while maintaining tight control  
24 over the satisfaction of the payment obligations.

25 These objectives may be obtained by the improved method of delivering  
26 payment information according to the present invention. The invention is  
27 directed to an improved method of delivering payment information from a  
28 plurality of payor entities. At least one data processing system is utilized to

1 sort and format payment information of the plurality of payor entities  
2 concerning the plurality of payment obligations. Payment information is  
3 communicated to the information service provider. At least one data  
4 processing system is utilized, which is under the control of the information  
5 service provider, to consolidate the payment information concerning the  
6 plurality of payment obligations from a plurality of payor entities in accordance  
7 with at least one predetermined consolidation criterion. Preferably, the  
8 predetermined consolidation criterion comprises grouping the payment  
9 information by payee identity, in order to obtain efficiencies in reporting  
10 information from a plurality of payors. Then, the payments are directed to the  
11 plurality of payees in order to satisfy the plurality of payment obligations. The  
12 information service provider operates independently of others to direct  
13 consolidated payment information to the plurality of payees, without requiring  
14 active interaction between the information service provide and the plurality of  
15 payees. Preferably, the consolidated payment information is communicated  
16 either electronically or in printed format from the information service provider  
17 to the plurality of payees. The plurality of payees are not required to interact,  
18 electronically, or otherwise, with the information service provider in order to  
19 obtain this information, but, otherwise, payees may elect to receive payment  
20 information electronically. In alternative embodiments, the plurality of payor  
21 entities may utilize one service provider to direct negotiable instruments to the  
22 plurality of payees, while using another service provider to direct consolidated  
23 financial information (such as payment information) to the plurality of payees,  
24 with each of the service providers operating independently of one another.

25 One particular embodiment of the consolidated payment information  
26 reporting of the present invention is depicted in block diagram, flowchart, and  
27 pictorial form in **Figures 32, 33, and 34.**

28 **Figure 32** is a pictorial representation of a plurality of steps which are



1 performed by a plurality of payor entities 19 and 21, service provider 11, a  
2 plurality of payee entities 29 and 31, and trusted intermediary 13. For  
3 purposes of simplicity, the interaction of only one payor entity 19 and one  
4 payee entity 29 is described. The present invention contemplates that a  
5 plurality of payor entities utilize the service provider in order to consolidate and  
6 deliver payment information to a plurality of payee entities. Preferably, the  
7 payment information is consolidated in accordance with the identity of the  
8 payee entities. As is shown in Figure 32, only payor 19 and payee 29 will be  
9 discussed in detail; however, the relationship between the other payors (such  
10 as payors 21) and other payees (such as payee 31) is visually represented by  
11 arrows 28, 34, 42, 38. What follows is a step-by-step description of preferred  
12 operation.

13 STEP ONE: In this step, payor 19 and service provider 11 enter into a  
14 contractual relationship regarding the delivery of payment information to a  
15 plurality of payor entities on behalf of payor 19. Preferably, this contractual  
16 relationship is communicated electronically between payor 19 and service  
17 provider 11, and provides authorization to service provider 11 to perform the  
18 information delivery services which will be described below.

19 STEPS TWO and THREE: In these steps, payor 19 utilizes a data processing  
20 system to first sort, and then format, payment obligation and information.  
21 Preferably, the payment information is formatted in a manner which facilitates  
22 the electronic communication of the information to service provider 11.

23 STEP FOUR: In this step, payor 19 communicates the payment information to  
24 service provider 11. The payment information may be communicated to service  
25 provider 11 via a distributed data processing system, through intermittent  
26 connection between payor 19 and service provider 11 utilizing a modem or the  
27 like, or by delivering a magnetic or optical media from payor 19 to service

provider 11.

STEPS FIVE and SIX: In these steps, payor 19 directs payment to payee 29 and the other payees. Payor 19 may communicate a negotiable instrument to payee 29; this is identified in Figure 32 as step "5A". Alternatively, payor 19 may utilize an electronic funds transfer to direct funds from the payor's bank 13 to the bank of payee 29; this obligation is depicted in Figure 32 as steps "5B" and "6". The electronic funds transfer is supported by an electronic funds transfer agreement which is visually represented in Figure 32 as step "5C". The view of Figure 32 is simplified, and does not depict the use of automated or other clearing houses to simplify the exposition.

STEPS SEVEN, EIGHT, and NINE: In these steps, service provider 11 utilizes one or more data processing systems under its control to sort and consolidate the payment information by the identity of the payees. In the view of Figure 32, step "7" corresponds to the sorting activity, and step "8" corresponds to the consolidation activity. Step "9" corresponds to the generation of printed or electronic communication which includes consolidated payment information.

STEP TEN: In step "10", the payment information which has been consolidated in the foregoing steps is communicated to the plurality of payees. There are two alternative techniques for communicating the consolidated payment information to the plurality of payees. One technique is to print a report and direct it to the payees via conventional delivery services such as the United States Postal Service. The alternative technique is to communicate the consolidated payment information to the plurality of payees utilizing an electronic format. In the view of Figure 32, step "10A" represents the conventional delivery of printed material. In contrast, steps "10B" and "10C" represent the deliver of the consolidated payment information in electronic format is a two step process. In step "10B", the information is delivered to an

1 electronic mail address for payee **29**. Once the electronic mail has been opened  
2 and/or read by payee **29**, a confirmation of receipt is directed back to service  
3 provider **11**. This confirmation of receipt is represented in **Figure 32** as step  
4 "10C". Since not all e-mail servers provide delivery receipts, alternatively  
5 service provider may e-mail payee to notify of new data being available, and  
6 payee logs on to service provider database and retrieves password protected  
7 payee data.

8 STEPS ELEVEN, TWELVE, THIRTEEN, and FOURTEEN: In these steps, payee  
9 **29** presents the negotiable instrument, in accordance with step "11", to its  
10 bank. The bank in turn presents the negotiable instrument through a  
11 clearinghouse to payor bank **13**, in accordance with step "12". The bank **13**  
12 honors the instrument, in accordance with step "13", and the payees bank  
13 credits the payees account, in accordance with step "14".

14 STEP FIFTEEN: In accordance with step fifteen, payor bank **13** confirms  
15 payment of the negotiable instruments to payor **19**.

16 **Figure 33** is a flowchart representation of the steps utilized in performing  
17 the information providing service. The process commences at software block  
18 **1611**, and continues at software block **1613**, wherein a contractual  
19 arrangement for outsourcing of the delivery of payment information is reached.  
20 This flowchart step corresponds to step number one in **Figure 32**. Then, the  
21 process commences at software block **1615**, wherein each payor sorts and  
22 formats the payment information utilizing its own data processing system. This  
23 corresponds to steps two and three of **Figure 32**. The formatted payment  
24 information is then communicated to service provider **11**, in accordance with  
25 software block **1617**. This corresponds to step four in **Figure 32**. Then, in  
26 accordance with software block **1619**, payor **19** delivers the payment without  
27 including the detailed payment information. This corresponds to steps 5A, 5B,

1 and 5C in **Figure 32**. Then, in accordance with software block **1621**, service  
2 provider **11** sorts, consolidates, and prints the payment information. This  
3 corresponds to steps seven, eight, and nine of **Figure 32**. Then, service  
4 provider **11** communicates the payment information, in accordance with  
5 software block **1623**. This corresponds to steps 10A, 10B, and 10C. In  
6 accordance with software block **1627**, service provider **11** may optionally  
7 report delivery of the payment information. The process ends at software block  
8 **1629**.

9 **Figure 34** is a pictorial representation of printed information which may  
10 be provided by service provider **11** to the particular one of the plurality of  
11 payees. The payment information includes the names of the payors, the  
12 amounts of the payments, and detailed information regarding the payment. The  
13 printed material identifies the source of the payment in as-detailed a manner as  
14 is desired by the plurality of payors. The report is similar to the payment  
15 information of **Figure 27**, so the same reference numerals are utilized.

16 A variety of alternative arrangements can be utilized to deliver the  
17 payment information utilizing a service provider. As stated above, the plurality  
18 of payors may direct negotiable instruments to the plurality of payees.  
19 Alternatively, the plurality of payors may utilize electronic funds transfer  
20 operations in order to transfer funds from their accounts to the payees  
21 accounts. Alternatively, the plurality of payor entities may utilize a different  
22 service provider to direct negotiable instruments to the plurality of payee  
23 entities on behalf of the plurality of payor entities. In this way, the plurality of  
24 payors may divide the services between an information service provider and a  
25 payment service provider. The payment service provider may be optionally  
26 utilized to consolidate payment obligations into a single negotiable instrument,  
27 for each payee. Alternatively, the payment service provider may initiate  
28 electronic funds transfers which effect the transfer of funds between accounts

1 under the direct or indirect control of the plurality of payors and the accounts  
2 under the direct or indirect control of the plurality of payees. Optionally, the  
3 payment service provider may bundle the electronic fund transfers together in  
4 order to minimize the total number of electronic funds transfers needed in order  
5 to effect payment for a plurality of payors. The service provider may utilize one  
6 or more data processing systems under its control to sort the payment  
7 information by at least one of (1) the payee identity, and (2) a preselected time  
8 interval for the reporting. The reporting interval may be defined by statute or  
9 by commercial practices in a particular industry. For oil and gas transactions,  
10 that payment interval may be as long as one year (when allowed by statute) or  
11 as short as one month. Utilizing the information reporting system for reporting  
12 payment information relating to government programs and entitlements may  
13 allow longer or shorter intervals. The information service provider may  
14 communicate the payment information either electronically to the plurality of  
15 payees, or may communicate printed consolidated payment information to the  
16 plurality of payees.

17 While the invention has been shown in only one of its forms, it is not  
18 thus limited but is susceptible to various changes and modifications without  
19 departing from the spirit thereof.